b.) Amendments to the Specification

Please amend the specification as follows (page and line numbers refer to the enclosed English language version of the application):

- At page 1, line 3, please insert:

  -- Field of the Invention --

- At page 1, line 9, please insert:

  -- Description of the Background --

- At page 3, line 12, please insert:

  -- Summary of the Invention

The present invention provides, generally, methods for production of plant storage lipids.

One embodiment of the invention is directed to method for production of plant storage lipids containing polyunsaturated fatty acids comprising providing an enzyme mixture containing at least one enzyme with phospholipid:diacylglycerol acyltransferase activity. Preferably the enzyme mixture contains at least one further enzyme with activity of a hydroxylase, epoxygenase, acetylenase, desaturase, elongase, conjugase, trans-desaturase or isomerase. Polyunsaturated fatty acids produced by these methods comprise one or more of long-chain polyunsaturated fatty acids, gamma-linolenic acid, arachidonic acid, gamma-limolenic acid, eicosapentaenoic acid, stearidonic acid or docosahexaenoic acid. The at least one enzyme may be encoded by a nucleotide sequence such as SEQ ID No. 1 or alleles thereof, or has the amino acid sequence of SEQ ID No. 1, or may be capable of replication, present in a plant cell in at least two copies or contains regulatory sequences that bring about an at least two-fold increase in gene expression or enzyme activity. The nucleotide sequence may be encoded chromosomally or extrachromosomally, and is preferably derived from plants such as, for example, *Arabidopsis thaliana*.

Other embodiments and advantages of the invention are set forth in part in the description, which follows, and in part, may be obvious from this description, or may be learned from the practice of the invention.

Description of the Figures

Figure 1A. Northern blot analysis of total RNA from leaves and roots of *A. thaliana* C24 control plants transformed with a blank control vector and three different *A. thaliana* plants transformed with a vector containing SEQ ID No. 2 under the control of the 35S promoter.

Figure 1B. Conversion of sn-1-oleoyl-sn-2-[^{14}C]-ricinoleyl-PC during incubation for one hour with microsomes from leaves of *A. thaliana* C24 control plants transformed with a vector containing SEQ ID No. 1 under the control of the 35S promoter.

Figure 1C. Conversion of sn-1-oleoyl-sn-2-[^{14}C]-ricinoleyl-PC during incubation for one hour with microsomes from roots of *A. thaliana* C24 control plants transformed with a vector containing SEQ ID No. 1 under the control of the 35S promoter.

Figure 2. *In vitro* sysnthesis of TAG containing a veroloyl and a [^{14}C]-ricinoleyl group in microsomes of leaves of *A. thaliana* C24 control plants and three different *A. thaliana* plants transformed with a vector containing SEQ ID No. 1 under the control of the 35S promoter.

Figure 3. Substrate specificity of the protein with PDAT activity which is encoded by SEQ ID No. 1.

Description of the Invention --

- At page 24, line 26, please insert:

  -- Examples --

- At page 28, line 16, please insert:

-- Other embodiments and advantages of the invention are set forth in part in the description, which follows, and in part, may be obvious from this description, or may be learned from the practice of the invention. All references cited herein, including all U.S.

and foreign patents and patent applications, and all publications or other documentary materials, are specifically and entirely hereby incorporated herein by reference. It is intended that the specification and examples be considered exemplary only. --